

## **Proposed Item for Biobased Designation**

The following biobased product information has been collected to support item designation by USDA for the Federal Biobased Product Preferred Procurement Program (FB4P). This summary reflects data available as of July 26, 2006.

### **Title: Fertilizers**

**Description:** Organic or inorganic matter containing beneficial nutrients for plant growth.

**Manufacturers Identified:** 16 manufacturers producing Fertilizers have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

**Industry Associations Investigated:** The following industry associations have been investigated for member companies producing Fertilizers:

- International Fertilizer Industry Association
- Biobased Manufacturers Association
- United Soybean Board
- The Fertilizer Institute
- European Fertilizer Manufacturers Association
- International Fertilizer Development Center
- California Fertilizer Foundation

**Commercially Available Products Identified:** Of the manufacturers identified, 32 Fertilizers are commercially available on the market.

**Product Information Collected:** Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 14 Fertilizers.

**Industry Performance Standards:** Product information submitted by biobased manufacturers indicate that have typically been tested to the following industry standards:

- Organic Materials Review Institute Listed seal assures the suitability of a product for certified organic production, handling, and processing
- United States Composting Council Seal of Testing Assurance

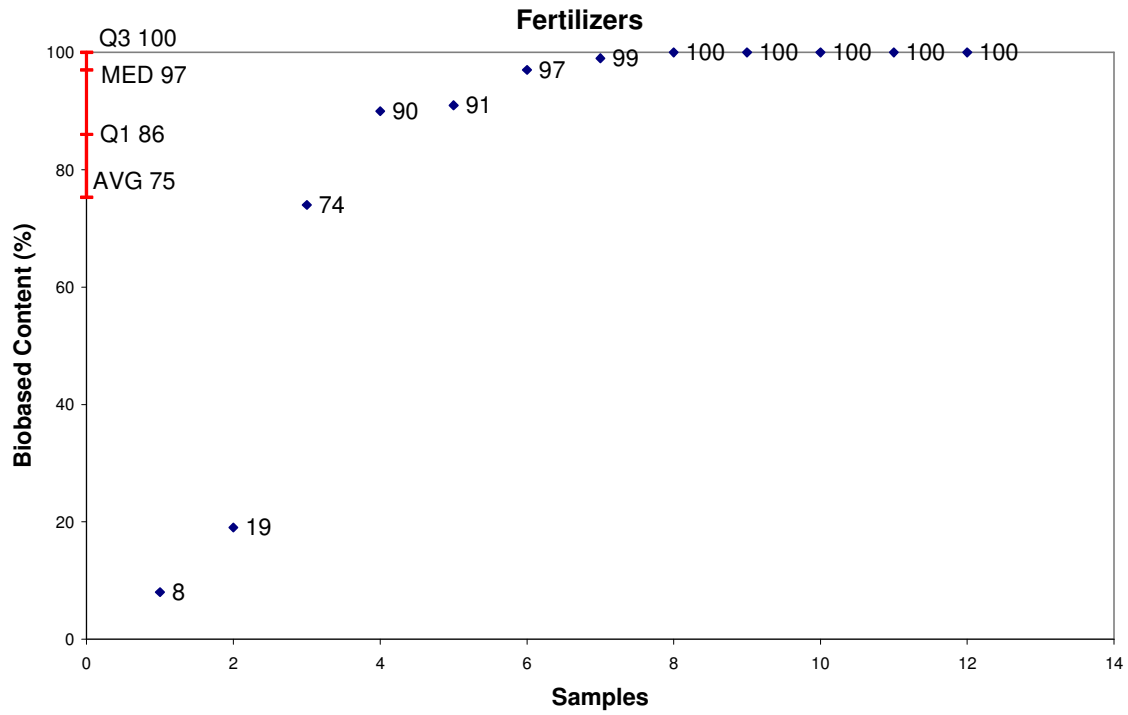
**Samples Tested for Biobased Content:** 12 samples of Fertilizers have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

**Biobased Content Data:** Results from biobased content testing of Fertilizers indicate a range of content percentages from 8% minimum to 100% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

**Products Submitted for BEES Analysis:** Life-cycle cost and environmental effect data for 2 Fertilizers have been submitted to NIST for BEES analysis.

**BEES Analysis:** The life-cycle costs of the submitted Fertilizers range from \$17.64 minimum to \$195.43 maximum per usage unit. The environmental scores range from 0.3299 minimum to 0.9576 maximum. A detailed summary of the BEES results is included as Appendix B.

## Appendix A - Biobased Content Data

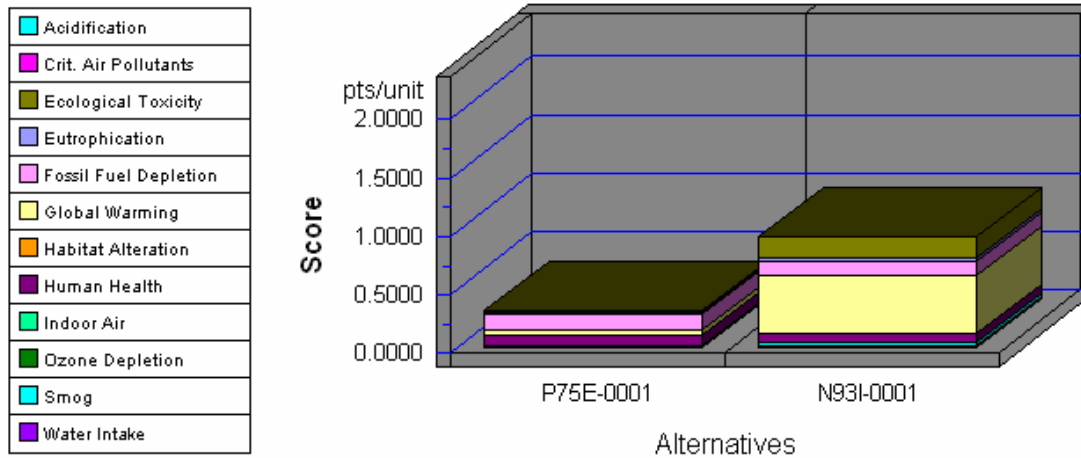


	Manufacturers Identified	Products Identified	C14	BEES
1	BNK2	BNK2-0004	8	
2	CH23	CH23-0015	19	
3	HP9P	HP9P-0008	74	
4	CH23	CH23-0016	90	
5	XVF4	XVF4-0002	91	
6	HP9P	HP9P-0011	97	
7	HP9P	HP9P-0009	99	
8	B6YO	B6YO-0003	100	
9	B6YO	B6YO-0002	100	
10	N93I	N93I-0001	100	yes
11	HP9P	HP9P-0010	100	
12	P75E	P75E-0001	100	yes

## Appendix B - BEES Analysis Results

Units: Fertilizing 1 Acre Over 3 Years

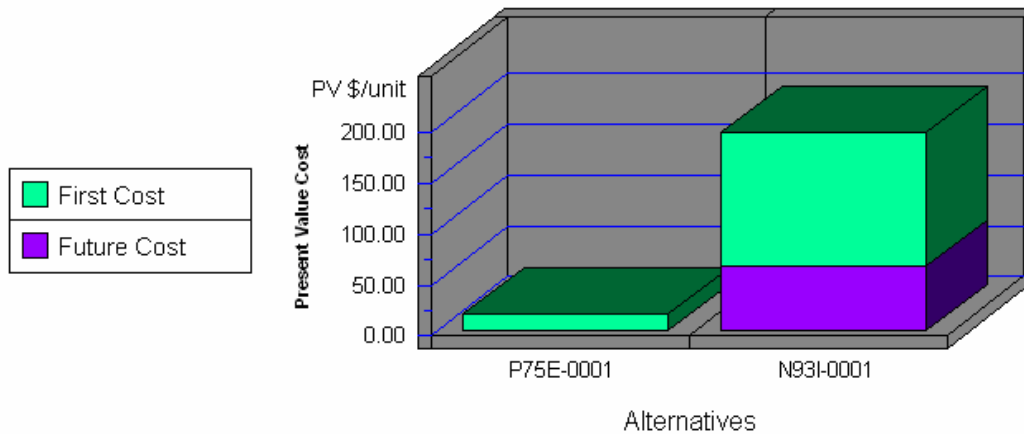
### Environmental Performance



**Note: Lower values are better**

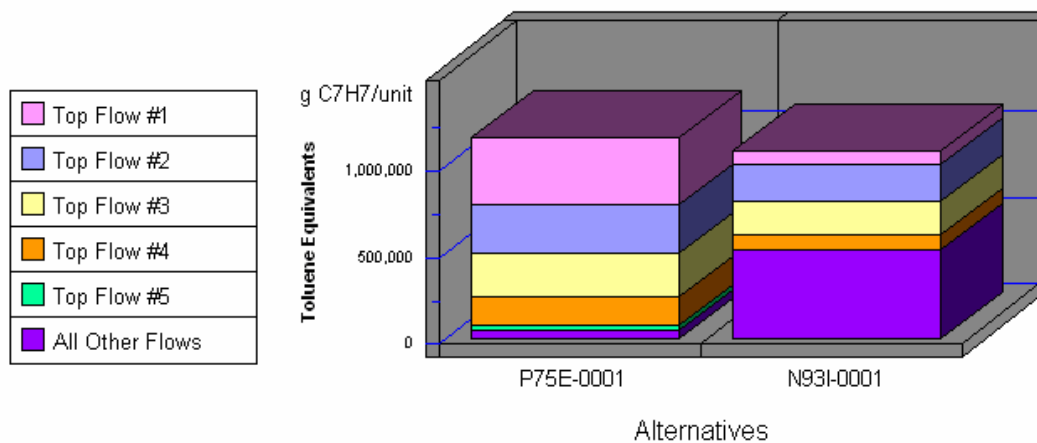
Category	P75E-0001	N93I-0001
Acidification--5%	0.0000	0.0000
Crit. Air Pollutants--6%	0.0020	0.0039
Ecolog. Toxicity--11%	0.0212	0.1754
Eutrophication--5%	0.0061	0.0407
Fossil Fuel Depl.--5%	0.1455	0.1203
Global Warming--16%	0.0493	0.4941
Habitat Alteration--16%	0.0000	0.0000
Human Health--11%	0.0809	0.0753
Indoor Air--11%	0.0000	0.0000
Ozone Depletion--5%	0.0000	0.0000
Smog--6%	0.0249	0.0221
Water Intake--3%	0.0000	0.0258
<b>Sum</b>	<b>0.3299</b>	<b>0.9576</b>

## Economic Performance



Category	P75E-0001	N93I-0001
First Cost	17.64	132.00
Future Cost-- 3.9%	0.00	63.43
<b>Sum</b>	17.64	195.43

## Human Health by Sorted Flows\*



**Note: Lower values are better**

Category	P75E-0001	N93I-0001
Cancer--(a) Dioxins (unspecifie	390,585.15	77,351.18
Cancer--(w) Arsenic (As3+, As5+	283,972.36	209,967.44
Cancer--(w) Phenol (C6H5OH)	243,747.20	191,630.20
Cancer--(a) Arsenic (As)	169,975.36	86,736.40
Noncancer--(a) Dioxins (unspeci	23,321.24	4,618.52
All Others	56,086.26	516,451.03
<b>Sum</b>	1,167,687.57	1,086,754.77

\*Sorted by five topmost flows for worst-scoring product